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ABSTRACT

This paper describes the faculty training model utilized in the development and/or conversion of course materials to be delivered on the World Wide Web. A description of the online learning environment (WTOnline) is provided, as well as the process by which faculty members in the West Texas A&M University College of Education interact with that environment during course planning and creation. The importance of a faculty member's early entry into his or her virtual classroom is discussed in terms of the ability to tap into prior teaching experiences and to drive Web course development. The training content is briefly described, including introduction to distance education, orientation to WTOnline, development and communication tools, instructional design issues, promoting online interaction, visual design, analysis of course examples, and sample class layout. A table lists traditional activities and related online activities. (Contains 1 figure, 1 table, and 20 references.) (Author/AEF)

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Teaching Online: A Professional Development Model

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Abstract: This paper describes the faculty training model utilized in the development and/or conversion of course materials to be delivered on the web. A description of the online learning environment will be provided, as well as the process by which faculty members in the College of Education interact with that environment during course planning and creation. The importance of faculty member's "early entry" into his or her virtual classroom is discussed in its ability to tap into prior teaching experiences and drive web course development.

Introduction

The development and/or conversion of courses to be taught in a web-based environment requires significant support for faculty involved in that process. Many times, teaching faculty members how "to teach online" requires that they be "reacquainted" with best practices in the traditional, face-to-face setting. Technology use is also critical in the development process. It is interesting to note that once the comfort zone is approached, and in some cases, established in the use of the technology, intuitive teaching practices seem to emerge, and even drive the development of web-based courses. The development model and its impact on the development and/or conversion, and ultimate maintenance of web-based courses at WTAMU in the teacher education program is described.

The Virtual Learning Environment

WTOnline is the virtual university at West Texas A&M University. It is composed of students and instructors who come together and fill spaces we know as classrooms—classrooms where real teaching and learning take place. The virtual classroom is mediated through information technologies that promote learning at a distance, specifically, Internet-based instruction. It is important to note that in every case, technology is secondary to course content and should only be utilized to support the instructional environment. Two salient features, structure and support, have driven the development of the virtual university and will be discussed as they relate to its ability to support instruction.

Online Structure and Support

Structural concerns of the virtual university include organizational and technological issues. Organizational issues focus on the people aspect of the university, while technological issues focus on the creation of the virtual environment.

Organization

The salient feature of WTOnline is its people. Each contribute in a unique way, providing support

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for the student whom enters the virtual classroom and the faculty member who teaches there. The following contributions are made by each:

0_ The faculty members are the content experts, instructional designers, and in some cases, HTML authors.

1_ The student-based Web Team creates and maintains the virtual learning environment and provides web programming, as well as HTML authoring expertise for faculty.

2_ The Web Programmer performs server-side programming and administers the website.

3_ The Director of the Instructional Innovation and Technology Lab (IITL) provides oversight for the diverse groups involved in the virtual university, administration of the site, and training and instructional design assistance for faculty.

It must be pointed out that a team mentality further supports the organizational aspect of the online university; the participants share many tasks. The team members work together the semesters prior to and during the delivery of instruction. In addition to the support of the web team and the director, each faculty member is assigned a part-time graduate student to facilitate the process.

Support structures are also available for students taking the online courses. Content questions are directed to faculty via e-mail and chat sessions. Technology related problems are handled through the student-based dial-up help line and the employees of the IITL.

Technology

The flexibility of the web-based interface used in the development of the virtual learning environment is natural and instinctive in the platform-independent delivery of instruction. More importantly, the web's ability to support a multiprotocol environment has put the tools of teaching and learning into the hands of faculty and students. The user-friendly interface provides access to the hardware and software which supports WTOnline, including the web server, mail server, and chat server. This access flexibility is apparent in the internal and external navigation set up for the virtual classroom.

Internal navigation provides access to the resources inside of the classroom. Clicking on the indicated buttons on the navigation bar accesses the following resources:

0+ Go to Unit – provides access to the weekly unit of study.

1+ Calendar – provides access to the upcoming events in the class.

2+ Chat – a java-based chat is used to support synchronous communication in the classroom. Each class is allotted one chat room, which can only be used by class members.

3+ E-mail – provides access to an interactive form where instructors', classmates', and/or technical support personnel names can be checked off a list, submitted, and a new message page is spawned correctly addressed.

4+ Forum – each class has a forum (threaded discussion) set up in support of asynchronous discussion.

5+ Peer Expertise – web pages set up for the sharing of group projects. These pages are automatically posted via interactive forms.

6+ Student Homepages – biographical information and a picture is provided in this area. Further links to the student's portfolio of work. These pages are automatically posted via interactive forms.

7+ Syllabus – traditional classroom information is always accessible.

8+ Help – tutorials, FAQs, and interactive help request.

External navigation or the ability to "change channels" is provided in another navigation bar and includes a link to the virtual university homepage, the university homepage, and the university library.

The Adult Learner

Familiarizing faculty with the online learning environment means providing a comfort level with the technology. "As learning networks are increasingly adopted as part of the learning process, teachers will

need corresponding support to integrate these new tools into their teaching and professional development activities" (Harasim, Hiltz, Teles, & Turoff, 1995, p.44). Consequently, technology training is critical as instructors learn to negotiate the emergent teaching and learning environment. The following factors have been identified as crucial to effective technology training for educators.

0. voluntary participation (Harris, 1994; Schrum & Fitzgerald, 1996)
1. needs-based (Collis, Veen, & De Vries, 1993; Dyer, 1995; Nemeth, 1993; Wesley &Franks, 1995)
2. ample time for experimentation, exploration, and integration (Harris, 1994; Schrum, etal., 1996; Siegel, 1995; Strudler & Powell, 1993)
3. access to equipment and/or Internet connectivity (Harris, 1994; Schrum, et al., 1996)
4. administrative support (Honey & Henriquez, 1993; Schrum, et al., 1996; Strudler, et al., 1993)
5. on-site support (Barron & Ivers, 1993; Honey, et al., 1993; Siegel, 1995; Strudler, et al., 1993)
6. collegial interaction (Schrum, et al., 1996; Siegel, 1995; Strudler, et al., 1993)
7. the incorporation of adult learning principles (Schrum, et al., 1996).

In most cases, these factors are present when faculty are recruited to teach in the online environment. An effort must be made, however, to begin where the faculty member is in his or her use of technology. In many cases, positive technology experiences must be provided.

Experience

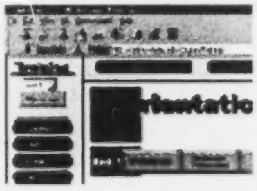
The most valuable resource the adult learner brings to a learning situation is experience (Holmes & Duffey, 1993; Lindeman, 1961). Dewey (1939) sees experience as the raw material the learner brings to the learning environment in the development of personal meaning. Rogers (1967) would argue that nothing can be taught that is not already known through experience. According to Knowles (1984), experiences provide the richest resources for adult earning (Knowles, 1984).

It is the lack of experiences in the use of technology that becomes problematic in the delivery of on-line learning opportunities. Goldenberg and Gallimore, (1991) stress that, "To understand how things work, it is necessary to have direct experience of them" (p.2). Few educators have had direct experiences with on-line technologies. Hiltz (1994) stresses that to be successfully involved in on-line professional development opportunities, the participants need some technical, as well as textual skills. A focus on the experiences the learner brings to the context should become the starting point for further learning (Dewey, 1933).

The experiences that the faculty members do bring to the training are those of teaching. While some instructors need to be "reacquainted" with best instructional practices, most bring an intuitive sense about what works and what doesn't in any classroom. Immediately placing faculty members in the virtual classroom immerses them in the technology, and provides them with the opportunity to do what they know how to do: Teach. Thus, the unfamiliar becomes familiar.

The Training Model

Training experiences are mediated in a "secure" face-to-face setting via the online classroom. Thus, instructors immediately gain experience in moving around the virtual space that will eventually host their course (Figure 1). Moreover, they are able to access the same material on the web for review and remediation when they return to their offices. The training content will be described in its ability to support



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positive technology experiences.

Figure 1. Technology Mediated Training

Training Content

An Introduction to Distance Education

Faculty are introduced to distance education from a historical perspective. Facts and figures are provided in support of the "need" for institutions of higher education, as well as specific academic programs, to get involved in the delivery of instruction at a distance.

Orientation to WTOnline

As indicated, faculty members are immediately taken into the online classroom, where training materials are mediated. The technology is introduced in an effort to provide navigation, as well as functional orientation. Faculty members soon recognize that once they have mastered the training site, they have skills to develop and maintain their classrooms.

Development and Communication Tools

As faculty members are provided orientation to the training materials, they learn to use the development and communication tools which will help them interface with their online classrooms. Netscape Communicator(is the development platform for WTOnline, including Messenger for e-mail communication and Composer for web page development and publishing. The E-Share(chat and threaded discussion forum are also utilized. Training participants will use these tools to participate in all training activities, thus providing critical technology experiences.

Instructional Design Issues

A formal review of instructional design theories and models is presented. An effort is made to link these to each faculty members' individual, discipline-specific teaching experiences. Then, an example of how principles of instructional design have defined the development of an online class is presented.

Promoting Online Interaction

Designing for student/student, student/instructor, and student/content interaction is critical to the success of the online learning environment. Faculty are asked to consider ways that student interaction occurs in a face-to-face setting, and are reminded that the only way they know that their students are participating in their online class is if they "interact" with them. Methods and tools for interaction are utilized to help faculty understand this process.

Visual Design

Human-computer interface issues are presented in an effort to promote an effective learning environment. Specifically, text, color, and graphics issues are reviewed. Examples and non-examples are critical to this portion of the training since early inclinations in web page development are to include "all" the bells and whistles.

Analysis of Course Examples

Based on experiences brought to the training as educators, and the training materials provided in the training session, faculty members have the opportunity to evaluate three courses, as to instructional and visual design and opportunities for interaction.

Example Class Layout

Faculty are given a paper-based planning tool that shows the tools available to them in the online classroom. Because the training provides the technology-based experiences need to enhance their teaching and learning experiences, faculty members are now ready to make some decisions about design of their virtual classroom.
They are asked to think about what kinds of resources and activities are needed to support their face-to-face instruction, and how that might be accomplished in the online classroom (Table 1).

Traditional Activity	Online Activity
Lecture	web page
Handouts	web page, PDF, email attachment
Visual Presentation	web page, converted Power Point
Demonstration	Java
Chapter Outlines	web page, PDF, paper study guide
Supplemental Reading/ Info	Internet sites, PDF
Assignment transfer	email, HTML form, postal mail
Vocabulary	web page, javascript
Group Discussion	chat, threaded discussion, email
Test	HTML form
Quiz	self-correcting (javascript)
Research	online library services, Internet, electronic reserve

Table 1. Traditional Activity becomes Online Activity

Reciprocal Transformation

The quality of online courses increases as faculty members feel comfortable in using the tools available in the online university. The staff is often challenged to assist faculty in more complex applications of the technology in their courses. Consequently, more and better initial technology experiences translate into better courses and more effective training practices. Miles and Huberman (1994) refer to this idea as "reciprocal transformation" (p.58), explaining, "Teachers change the characteristics of new practices. Those practices, in turn, change the teachers and modify working arrangements in the classroom, which, in turn, influence how much of the innovation can be used, and so on" (p.58). Ultimately, providing faculty with the tools and support needed to teach in the online classroom will result in effective instruction.

References

Barron, A., & Ivers, K. (1993). Telecommunication training materials for teacher education. In D. Carey, R. Carey, D. Willis, & J. Willis (Eds.), Technology and Teacher Education Annual 1993. (pp. 648-653). Charlottesville, VA: Association for the Advancement of Computing in Education.

Collis, B., Veen, W., DeVries, P. (1993). Preparing for an interconnected future: Policy options for telecommunications in education. Educational Technology, 36(1), 17-24.

Dewey, J. (1933). How we think. Boston: D.C. Heath and Company.

Dewey, J. (1939). Experience and education. In S. Merriam (ed.), Selected writings on philosophy and adult education (pp.27-30). Malabar, Florida: Krieger Publishing Company.

Dyer, D. (1995). Instructional design theory and scientific content for higher education. In M. Simonson & M. Anderson, (Eds.) Proceedings of Selected Research and Development Presentations at the 1995 National Convention of the Association for Educational Communications and Technology.

Goldenberg, C. and Gallimore, R. (1991). Local knowledge, research knowledge, and educational change: A case study of early spanish reading improvement. Educational Researcher, 20 (8), 2-14.

Harasim, L., Hiltz, S., Teles, L., and Turoff, M. (1995). Learning networks. Cambridge, MA: The MIT Press.

Harris, J. (1994). Teaching teachers to use telecomputing tools. The Computing Teacher, 21(8) 60-63.

Hiltz, R. (1994). The virtual classroom. Learning without limits via computer networks. Norwood, NJ: Ablex Publishing Corporation.

Holmes, K. & Duffey, D. (1993). Technology staff development: Designing an effective process. Denton, Texas: Texas Center for Educational Technology.

Honey, M. & Henriquez, A. (1993). Telecommunications and K-12 educators: Findings from a national survey. A report for the Office of Educational Research and Improvement, sponsored by the Center of Technology in Education Bankstreet College of Education. Washington, DC: U.S. Government Printing Office.

Knowles, M. (1984). Andragogy in action. San Francisco: Jossey-Bass.

Lindeman, E. (1961). For those who need to be learners. In S. Merriam (Ed.), Selected writings on philosophy and adult education (pp.31-35). Malabar, Florida: Krieger Publishing Company.

Mezirow, J. (1993). A transformation theory of adult learning. In D. Flannery (Ed.), Adult Education Research Annual Conference Proceedings (pp.141-146). University Park, Pennsylvania: Pennsylvania State University.

Miles, M. & Huberman, M. (1994). Data management and analysis methods. In N. Denzin and Y. Lincoln (Eds.), Handbook of Qualitative Research (pp.428-444). Thousand Oaks, CA: Sage Publications, Inc.

Nemeth, E. (1993). Telecommunication training materials for teachers. In D. Carey, R.Carey, D. Willis, & J. Willis, (Eds.) Technology and Teacher Education Annual (654-658). Charolttesville, VA: AACE.

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Rogers, C. (1967). On becoming a person. London: Constable.

Schrum, L. & Fitzgerald, M. (1996). A challenge for the information age: Educators and the internet. International Journal of Educational Leadership, 2(2/3), 107-120.

Siegel, J. (1995). The state of teacher training. Electronic Learning, 14(8), 43-53.

Strudler, N. & Powell, R. (1993). Preparing teacher leaders and change agents for technology in education. Journal of Technology and Teacher Education, 1(4), 393-408.

Wesley, M. & Franks, M. (1995). The virtual classroom and vertically integrated technology training for education: New paradigms for telecommunications technology training of school personnel. Paper presented at the Annual Conference of the Mid-South Educational Research Association: Nashville, TN.